

Weekly report (2013.6.24 ~6.30)

Done

- 1) As concluded before, triangle-based and pixel-based methods outperformed under different condition. When a triangle is projected into a small area in the image space, pixel-based method is more suitable, while triangle-based method is better otherwise.
So, I made a hybrid edition and made comparison to the previous methods, as shown below.

| scene | boeing | | | museum | | |
|-----------------|--------|----------------|-------------|--------|----------------|-------------|
| method | hybrid | triangle-based | pixel-based | hybrid | triangle-based | pixel-based |
| level0 cost(s) | 105 | 8209 | 102 | 40 | 35 | 34 |
| level1 cost (s) | 127 | 14682 | 103 | 37 | 39 | 36 |
| level2 cost (s) | 217 | 14620 | 140 | 51 | 51 | 60 |
| level3 cost (s) | 298 | 9612 | 215 | 95 | 65 | 121 |
| level4 cost (s) | 522 | 6589 | 389 | 196 | 132 | 396 |
| level5 cost (s) | 919 | 3878 | 1218 | 534 | 406 | 2011 |

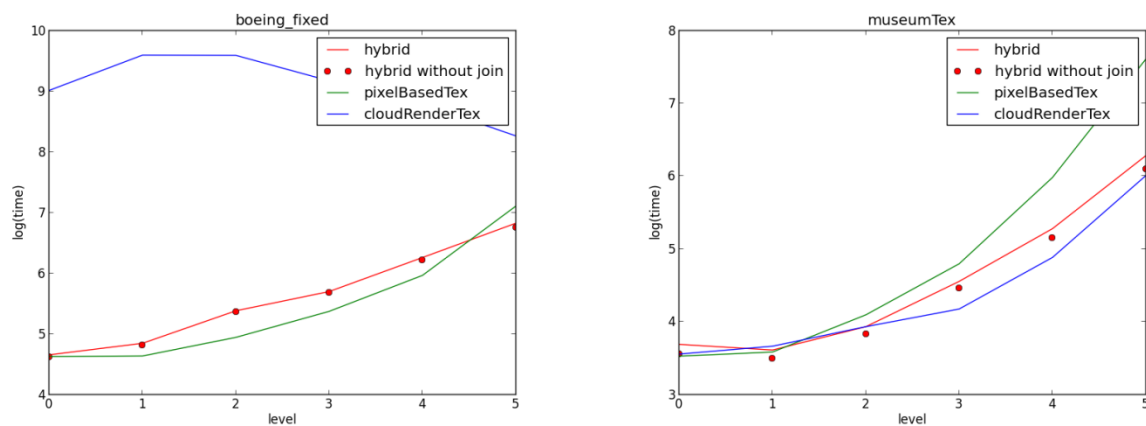


Figure 1 compare 3 method under different scenes and resolutions

From the figures, we can see that the hybrid method performs good under different situations.

- 2) Made a straight-forward visualization of a job. Different backgrounds encode different machines(nodes), different colored rectangle encodes different tasks (such as MapTask, Pixel-based ReduceTask...), we can easily tell how this job goes and where is the bottle-neck from the picture.

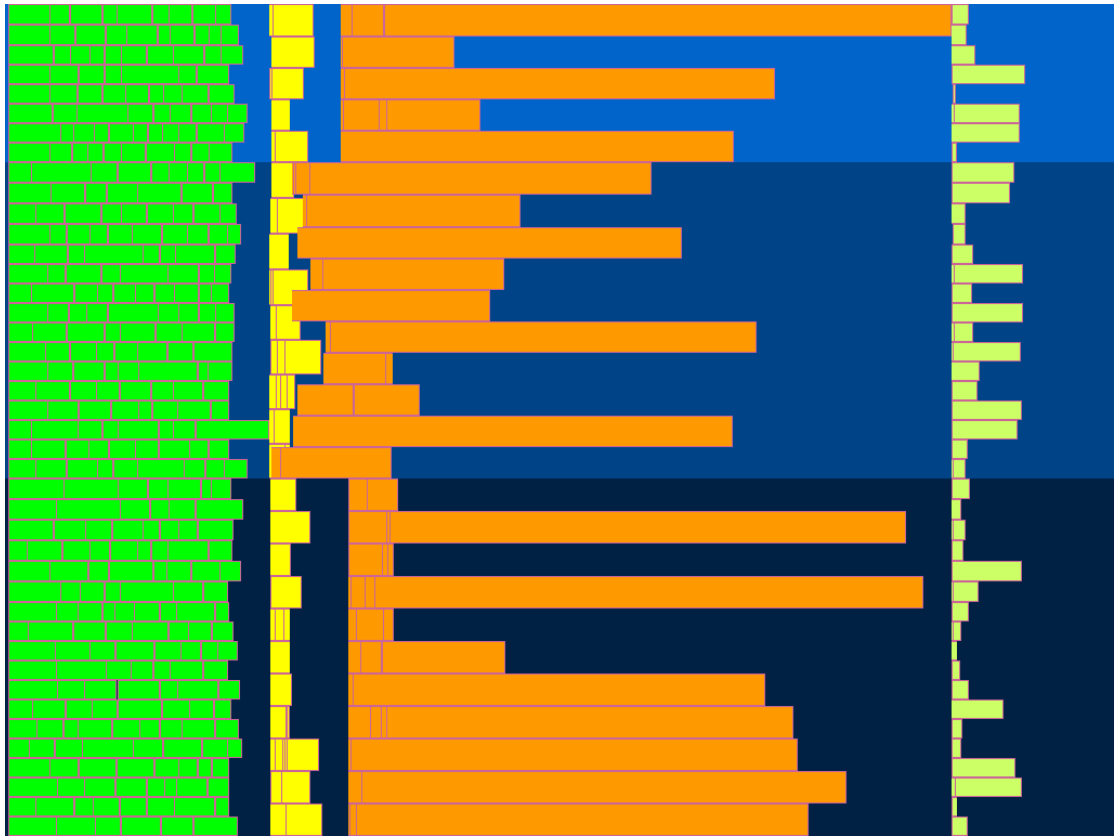


Figure 2 straight-forward visualization of a job

To Do

- 1) Read papers about illustrative rendering and application for large images, searching for several methods to implement and make it part of my paper.
- 2) Start my tasks in the Meteorology Project.